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Fall Meet. Suppl., Abstract xxxxx-xx, 2000

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voc

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TI: **The response of biogenic VOC emissions to Amazonian  
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AB: Biogenic VOC emissions can influence atmospheric chemical composition including oxidant and particulate levels. These emissions are sensitive to land use change resulting in a means of impacting the atmosphere through landuse changes. The Amazon region makes a significant contribution to the global biogenic VOC flux and changing the emissions from this region could impact the global atmosphere. Previous efforts to use numerical models to investigate the importance of biogenic emissions have been severely limited by a lack of emissions measurements. The recent LBA study has provided a much larger emissions database that includes enclosure measurements characterizing individual plant species, tower flux measurements quantifying above canopy fluxes, and tethered balloon measurements characterizing the ambient concentrations resulting from regional emissions. We have incorporated the flux measurements into a model of surface trace gas exchange, GLOBEIS, and have used the ambient concentration data to evaluate the model results. GLOBEIS predicts emissions of over 30 compounds with a spatial resolution of about 1 km and a time resolution of 1 hour. The impact of climate and landcover change on Amazonian biogenic VOC emissions were investigated using GLOBEIS. The results indicate that both climate and landuse change can have a significant impact on biogenic VOC emissions with potential consequences for atmospheric oxidant levels and climate.

DE: 9360 South America

DE: 1615 Biogeochemical processes (4805)

8934

DE: 0315 Biosphere/atmosphere interactions  
DE: 0365 Troposphere--composition and chemistry  
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JN: *Eos Trans. AGU*, 81 (48), Fall Meet. Suppl., 2000  
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